Inventors

L3 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:241713 HCAPLUS
DOCUMENT NUMBER: 122:75648
ENTRY DATE: Entered STN: 13 Dec 1994
TITLE: A carbohydrate biosensor surface for the detection of uropathogenic bacteria
AUTHOR(S): **Nilsson, Kurt G. I.; Mandenius, Carl-Fredrik**
CORPORATE SOURCE: Lund, S-223 70, Swed.
SOURCE: Bio/Technology (1994), 12(13), 1376-8
CODEN: BTCHDA; ISSN: 0733-222X
PUBLISHER: Nature Publishing Co.
DOCUMENT TYPE: Journal
LANGUAGE: English
CLASSIFICATION: 9-1 (Biochemical Methods)
ABSTRACT:

We have developed a new surface for use in biosensors that is based on a gold plate covered with a specific carbohydrate receptor structure. The carbohydrate, Galα1-4Gal, was bound covalently via a thioalkylcarboxy-spacer, or adsorbed as a neoglycoprotein, to a two-dimensional gold surface. Both types of surfaces showed high specificity in the binding of the uropathogenic bacteria P-fimbriated Escherichia coli compared to the binding of non-infectious bacteria. The signal to noise ratio is sufficiently high to allow specific detection of the bacteria in biosensor applications.

SUPPL. TERM: carbohydrate biosensor surface uropathogenic bacteria detection
INDEX TERM: Escherichia coli
(P-fimbriated; carbohydrate biosensor surface for the detection of uropathogenic bacteria)
INDEX TERM: Albumins, uses
ROLE: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(bovine, carbohydrate biosensor surface for the detection of uropathogenic bacteria)
INDEX TERM: Biosensors
(carbohydrate biosensor surface for the detection of uropathogenic bacteria)
INDEX TERM: Carbohydrates and Sugars, uses
ROLE: DEV (Device component use); USES (Uses)
(carbohydrate biosensor surface for the detection of uropathogenic bacteria)
INDEX TERM: Bacteria
(uropathogenic, carbohydrate biosensor surface for the detection of uropathogenic bacteria)
INDEX TERM: 7440-57-5, Gold, uses
ROLE: DEV (Device component use); USES (Uses)
(carbohydrate biosensor surface for the detection of uropathogenic bacteria)
INDEX TERM: 160294-57-5 160294-57-5D, conjugate with bovine serum albumin
ROLE: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(carbohydrate biosensor surface for the detection of uropathogenic bacteria)

L3 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:235036 HCAPLUS
DOCUMENT NUMBER: 122:4932
ENTRY DATE: Entered STN: 10-Dec-1994
TITLE: Immobilized carbohydrate biosensor for detection of proteins, viruses, or cells
INVENTOR(S): **Nilsson, Kurt; Mandenius, Carl-Fredrik**
PATENT ASSIGNEE(S): Swed.
SOURCE: PCT Int. Appl., 14 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
INT. PATENT CLASSIF.:
MAIN: G01N033-543
SECONDARY: C12Q001-00
CLASSIFICATION: 9-1 (Biochemical Methods)
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9424561	A1	19941027	WO 1994-SE343	19940418
W: CA, CZ, JP, RU, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 648333	A1	19950419	EP 1994-914654	19940418
EP 648333	B1	20020109		
R: DE, ES, FR, GB, IT, SE				
US 6231733	B1	20010515	US 1994-356229	19941219
US 2001017270	A1	20010830	US 2001-766659	20010123

PRIORITY APPLN. INFO.:
SE 1993-1270 A 19930419
WO 1994-SE343 W 19940418
US 1994-356229 A1 19941219

ABSTRACT:
A biosensor is disclosed in which an immobilized carbohydrate or a derivative thereof is used to generate a detectable signal when a protein, virus, or cell is bound to the carbohydrate surface. The sensor is an optical sensor, a piezoelec. sensor, an electrochem. electrode, or a thermistor. A method of binding carbohydrates to a gold surface is also described.

SUPPL. TERM: immobilized carbohydrate biosensor; protein detection
immobilized carbohydrate biosensor; virus detection
immobilized carbohydrate biosensor; cell detection
immobilized carbohydrate biosensor
INDEX TERM: Urinary tract
(bacteria; immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)
INDEX TERM: Receptors
ROLE: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(carbohydrate sequence; immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)
INDEX TERM: Biosensors
Cell
Electrodes
Escherichia coli
Immobilization, biochemical

Virus
(immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Proteins, analysis
ROLE: ANT (Analyte); ANST (Analytical study)
(immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Aglycons
Carbohydrates and Sugars, biological studies
Glycopeptides
Glycoproteins, biological studies
Oligosaccharides
Thiols, biological studies
ROLE: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Hexosamines
ROLE: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(residue; immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Bacteria
(urinary tract; immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Albumins, biological studies
ROLE: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugates, with galabiose derivative; immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Amino acids, biological studies
ROLE: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(glycosyl, immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Glycoproteins, specific or class
ROLE: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(neo-, immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Biosensors
(optical, immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Biosensors
(piezoelec., immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: Biosensors
(thermistor-based, immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: 75281-88-8D, derivs.
ROLE: DEV (Device component use); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: 7440-57-5, Gold, biological studies 13117-26-5D,

Galabiose, derivs., albumin conjugates 30232-12-3, Mercaptopropionic acid
ROLE: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

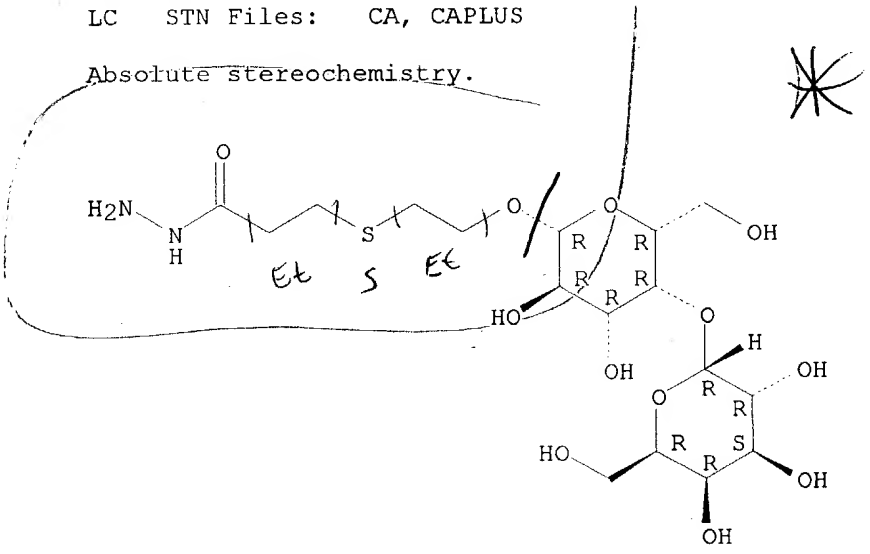
INDEX TERM: 151-51-9, Carbodiimide
ROLE: RCT (Reactant); RACT (Reactant or reagent)
(immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: 13117-26-5
ROLE: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(receptor; immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

INDEX TERM: 50-99-7, D-Glucose, biological studies 50-99-7D, D-Glucose, analogs 58-86-6, Xylose, biological studies 58-86-6D, Xylose, analogs 59-23-4, Galactose, biological studies 59-23-4D, Galactose, analogs 131-48-6, N-Acetylneuraminic acid 131-48-6D, N-Acetylneuraminic acid, analogs 2438-80-4, Fucose 2438-80-4D, Fucose, analogs 3458-28-4, Mannose 3458-28-4D, Mannose, analogs
ROLE: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(residue; immobilized carbohydrate biosensor for detection of proteins, viruses, or cells)

L4 ANSWER 1 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN **160294-57-5** REGISTRY
CN Propanoic acid, 3-[[2-[(4-O-α-D-galactopyranosyl-β-D-galactopyranosyl)oxy]ethyl]thio]-, hydrazide (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H32 N2 O12 S
SR CA
LC STN Files: CA, CAPLUS

Absolute stereochemistry.

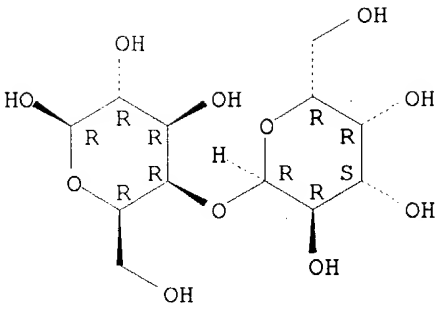


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 2 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN **75281-88-8** REGISTRY
CN β-D-Galactopyranose, 4-O-α-D-galactopyranosyl- (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C12 H22 O11
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



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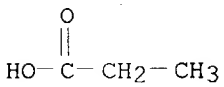
24 REFERENCES IN FILE CA (1907 TO DATE)
8 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
24 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 3 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN **30232-12-3** REGISTRY
CN Propanoic acid, mercapto- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Propionic acid, mercapto- (7CI)
OTHER NAMES:
CN Mercaptopropionic acid
MF C3 H6 O2 S
CI IDS, COM
LC STN Files: AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CIN, EMBASE, IFICDB, IFIPAT, IFIUDB, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

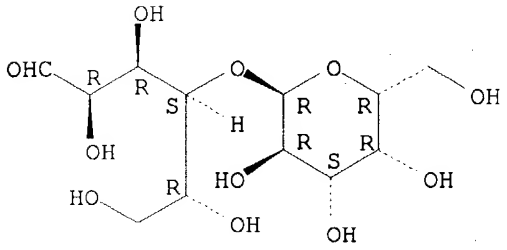


154 REFERENCES IN FILE CA (1907 TO DATE)
28 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
154 REFERENCES IN FILE CAPLUS (1907 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 4 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN **13117-26-5** REGISTRY
CN D-Galactose, 4-O-α-D-galactopyranosyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Galactose, 4-O-α-D-galactopyranosyl- (7CI)
CN Galactose, 4-O-α-D-galactopyranosyl-, D- (8CI)
OTHER NAMES:
CN α-D-Galp-(1-4)-D-Gal

CN 4α-Galactobiose
CN Galabiose
FS STEREOSEARCH
MF C12 H22 O11
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CANCERLIT, CAOLD, CAPLUS, MEDLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



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99 REFERENCES IN FILE CA (1907 TO DATE)
8 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
99 REFERENCES IN FILE CAPLUS (1907 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 5 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN **7440-57-5** REGISTRY
CN Gold (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN A 4631
CN A 4953
CN AY 5022
CN Britecote
CN Burnish Gold
CN C.I. 77480
CN C.I. Pigment Metal 3
CN Colloidal gold
CN Furuuchi 8560
CN G 1402
CN Gold 197
CN Gold black
CN Gold element
CN Gold Flake
CN Gold Leaf
CN Gold Powder
CN Palegold 5550
CN Perfect Gold
CN PH 870
CN SG 10NK
CN Shell Gold
CN TR 1306
DR 33019-35-1
MF Au

CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, TOXCENTER, ULIDAT, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

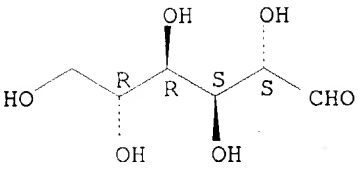
Au

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

138772 REFERENCES IN FILE CA (1907 TO DATE)
4092 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
138913 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 6 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN **3458-28-4** REGISTRY
CN D-Mannose (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Mannose, D- (8CI)
OTHER NAMES:
CN (+)-Mannose
CN Carubinose
CN D(+)-Mannose
CN Mannose
CN NSC 26247
CN Seminose
AR 530-26-7
FS STEREOSEARCH
DR 147-74-0
MF C6 H12 O6
CI COM
LC STN Files: ADISNEWS, AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DETHERM*, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (+).



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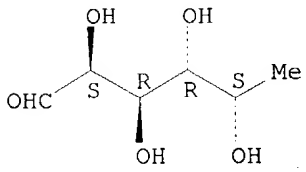
13669 REFERENCES IN FILE CA (1907 TO DATE)
623 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
13685 REFERENCES IN FILE CAPLUS (1907 TO DATE)
7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 7 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN **2438-80-4** REGISTRY
CN L-Galactose, 6-deoxy- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Fucose, L- (8CI)
OTHER NAMES:
CN (-)-Fucose
CN (-)-L-Fucose
CN 6-Deoxy-L-galactose
CN 6-Desoxygalactose
CN Fucose
CN L-(-)-Fucose
CN L-Fucose
CN L-Galactomethylose
AR 87-96-7, 3713-31-3
FS STEREOSEARCH
MF C6 H12 O5
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, TOXCENTER, TULSA, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5035 REFERENCES IN FILE CA (1907 TO DATE)
240 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
5039 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 8 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN **151-51-9** REGISTRY
CN Methanediimine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Carbodiimide (6CI, 7CI, 8CI)
OTHER NAMES:
CN Stabilisator 9000
FS 3D CONCORD
MF C H2 N2
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSNB, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, PIRA, PROMT, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

HN=C=NH

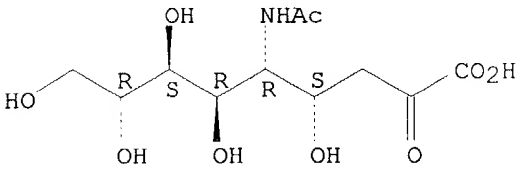
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

733 REFERENCES IN FILE CA (1907 TO DATE)
199 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
734 REFERENCES IN FILE CAPLUS (1907 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 9 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN **131-48-6** REGISTRY
CN Neuraminic acid, N-acetyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN D-glycero-D-galacto-2-Nonulosonic acid, 5-(acetylamino)-3,5-dideoxy-
CN D-glycero-D-galacto-Nonulosonic acid, 5-acetamido-3,5-dideoxy- (8CI)
CN Lactaminic acid (7CI)
OTHER NAMES:
CN 5-N-Acetyl-D-neuraminic acid
CN 5-N-Acetylneuraminic acid
CN Aceneuramic acid
CN Acetylneuraminic acid
CN N-Acetyl-D-neuraminic acid
CN N-Acetylneuramic acid
CN N-Acetylneuraminic acid
CN N-Acetylsialic acid
CN NANA
FS STEREOSEARCH
DR 6918-20-3, 11032-36-3, 14752-56-8, 5977-25-3, 6225-16-7
MF C11 H19 N O9
CI COM
LC STN Files: ADISINSIGHT, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MSDS-OHS, NIOSHTIC, PHAR, PROMT, PROUSDDR,

SPECINFO, SYNTHLINE, TOXCENTER, USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



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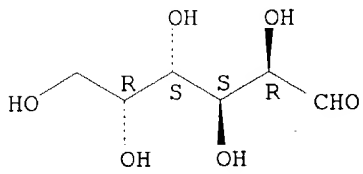
2516 REFERENCES IN FILE CA (1907 TO DATE)
161 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2518 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 10 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN **59-23-4** REGISTRY
CN D-Galactose (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Galactose, D- (8CI)
OTHER NAMES:
CN (+)-Galactose
CN D-(+)-Galactose
CN Galactose
FS STEREOSEARCH
DR 147-76-2, 3812-56-4, 400876-94-0
MF C6 H12 O6
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry. Rotation (+).

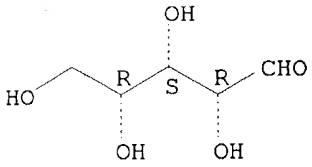


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

21536 REFERENCES IN FILE CA (1907 TO DATE)
761 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
21559 REFERENCES IN FILE CAPLUS (1907 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 11 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN **58-86-6** REGISTRY
CN D-Xylose (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Xylose, D- (8CI)
OTHER NAMES:
CN (+)-Xylose
CN D-(+)-Xylose
CN Wood sugar
CN Xylose
FS STEREOSEARCH
DR 133-56-2, 141492-19-5
MF C5 H10 O5
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, USAN, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



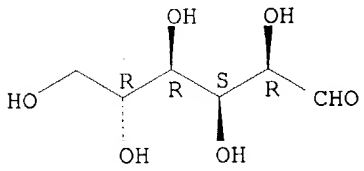
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

13871 REFERENCES IN FILE CA (1907 TO DATE)
317 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
13882 REFERENCES IN FILE CAPLUS (1907 TO DATE)
5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 12 OF 12 REGISTRY COPYRIGHT 2004 ACS on STN
RN **50-99-7** REGISTRY
CN D-Glucose (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN (+)-Glucose
CN Anhydrous dextrose

CN Cartose
CN Cerelose
CN Cerelose 2001
CN Clearsweet 95
CN Clintose L
CN Corn sugar
CN CPC hydrate
CN D(+)-Glucose
CN D-glucose
CN Dextropur
CN Dextrose
CN Dextrosol
CN Glucodin
CN Glucolin
CN Glucose
CN Glucosteril
CN Goldsugar
CN Grape sugar
CN Maxim Energy Gel
CN Roferose ST
CN Staleydex 111
CN Staleydex 130
CN Staleydex 333
CN Sugar, grape
CN Tabfine 097(HS)
CN Vadex
FS STEREOSEARCH
DR 8012-24-6, 8030-23-7, 162222-91-5, 165659-51-8, 50933-92-1, 80206-31-1
MF C6 H12 O6
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IMSCOSEARCH, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, PS, RTECS*, SPECINFO, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.

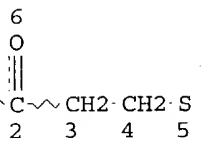


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

167083 REFERENCES IN FILE CA (1907 TO DATE)
2199 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
167254 REFERENCES IN FILE CAPLUS (1907 TO DATE)

14 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L5 STR



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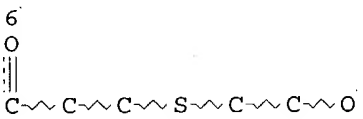
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE
L8 9777 SEA FILE=REGISTRY SSS FUL L5
L9 STR



-O EESEECONHNH2

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
L10 17 SEA FILE=REGISTRY SUB=L8 SSS FUL L9
L18 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L10
L19 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 AND (IMMOBIL? OR COAT? OR ATTACH? OR BIOSENS? OR BIOCHIP? OR BIO?(2A)?SENS?)
L20 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 OR L19

=> d l20 ibib abs hitind hitstr 1-10

L20 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:711448 HCAPLUS
DOCUMENT NUMBER: 126:89666
TITLE: Synthesis of ligands related to the Vibrio cholerae O-specific antigen. Part 12. Synthesis of eight glycosides of hexasaccharide fragments representing the terminus of the O-polysaccharide of Vibrio cholerae O:1, serotype Inaba and Ogawa, bearing aglycons suitable for linking to proteins
AUTHOR(S): Ogawa, Yuji; Lei, Ping-sheng; Kovac, Pavol
CORPORATE SOURCE: Natl. Inst. Health, NIDDK, Bethesda, MD, 20892-0815, USA
SOURCE: Carbohydrate Research (1996), 293(2), 173-194
CODEN: CRBRAT; ISSN: 0008-6215

PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The title substances were prepared from intermediate, fully acetylated α-trimethylsilylethyl (SE) glycosides. The latter were assembled in a blockwise manner, using as the glycosyl donor the α-glycosyl chloride of a disaccharide bearing two 4-azido-4-deoxy functions. Next, the azido groups in the assembled hexasaccharides were converted to the corresponding amines, and these were acylated with 4-O-benzyl-3-deoxy-L-glycero-tetronic acid in the presence of a water-soluble carbodiimide. The Se glycoside were then transformed to glycosyl imidates, and these were coupled with Me 6-hydroxyhexanoate or Me 2-(2-hydroxyethylthio)propionate. The aglycons in the glycosides thus obtained were then converted to the corresponding carboxylic acids or acyl hydrazides. Such compds. are suitable for linking to proteins to obtain neoglycoproteins.

CC 33-7 (Carbohydrates)

IT 4547-43-7P, Methyl 6-hydroxyhexanoate 185248-27-5P 185248-28-6P 185248-29-7P 185248-30-0P **185248-54-8P** 185248-55-9P 185248-56-0P 185248-57-1P **185248-58-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of eight glycosides of hexasaccharide fragments representing the terminus of the O-polysaccharide of Vibrio cholerae)

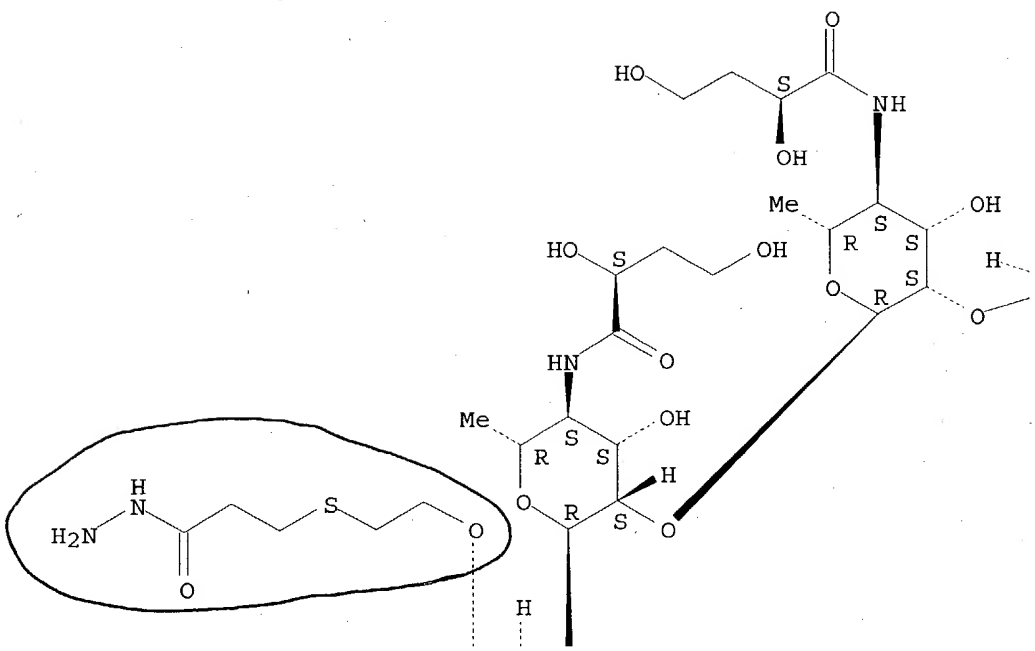
IT **185248-54-8P 185248-58-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of eight glycosides of hexasaccharide fragments representing the terminus of the O-polysaccharide of Vibrio cholerae)

RN 185248-54-8 HCAPLUS

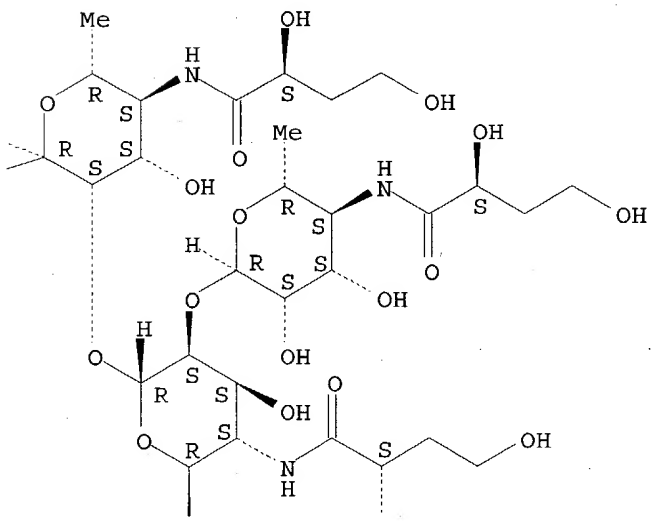
CN Propanoic acid, 3-[[2-[[O-4,6-dideoxy-4-[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]-α-D-mannopyranosyl-(1→2)-O-4,6-dideoxy-4-[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]-α-D-mannopyranosyl-(1→2)-O-4,6-dideoxy-4-[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]-α-D-mannopyranosyl-(1→2)-O-4,6-dideoxy-4-[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]-α-D-mannopyranosyl-(1→2)-O-4,6-dideoxy-4-[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]-α-D-mannopyranosyl-(1→2)-4,6-dideoxy-4-[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]-α-D-mannopyranosyl]oxy]ethyl]thio]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

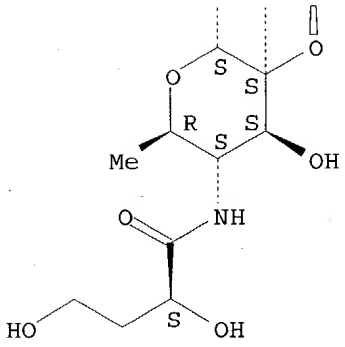
PAGE 1-A



PAGE 1-B



PAGE 2-A



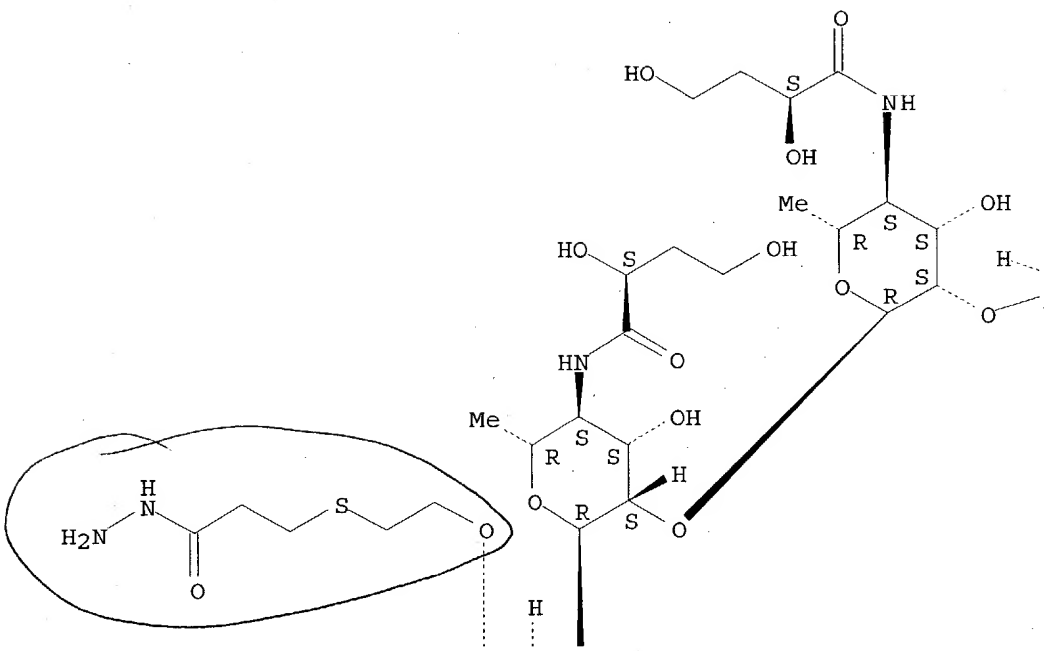
PAGE 2-B

RN 185248-58-2 HCAPLUS

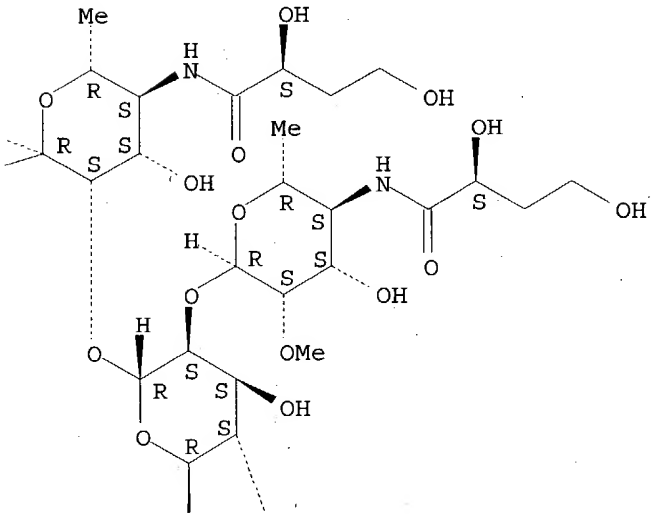
CN Propanoic acid, 3-[[2-[[O-4,6-dideoxy-4-[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]-2-O-methyl-α-D-mannopyranosyl-(1→2)-O-4,6-dideoxy-4-[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]-α-D-mannopyranosyl-(1→2)-O-4,6-dideoxy-4-[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]-α-D-mannopyranosyl-(1→2)-O-4,6-dideoxy-4-[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]-α-D-mannopyranosyl-(1→2)-O-4,6-dideoxy-4-[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]-α-D-mannopyranosyl-(1→2)-4,6-dideoxy-4-[[(2S)-2,4-dihydroxy-1-oxobutyl]amino]-α-D-mannopyranosyl]oxy]ethyl]thio]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

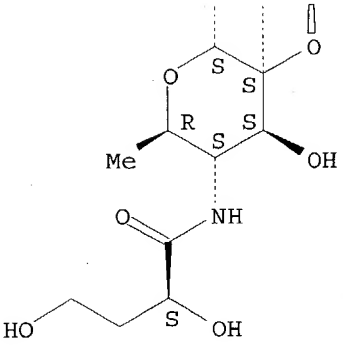
PAGE 1-A



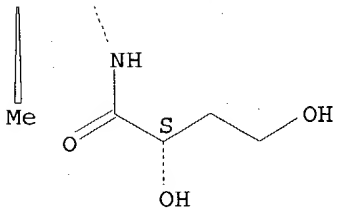
PAGE 1-B



PAGE 2-A



PAGE 2-B



REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:504622 HCAPLUS
DOCUMENT NUMBER: 125:276374
TITLE: Synthesis of ligands related to Vibrio cholerae O-specific antigen. II. Synthesis of four glycosides of a disaccharide fragment representing the terminus of the O-polysaccharide of Vibrio cholerae O:1, serotype Inaba, bearing aglycons suitable for linking to proteins
AUTHOR(S): Ogawa, Yuji; Lei, Ping-sheng; Kovac, Pavol
CORPORATE SOURCE: NIDDK, Nat. Inst. Health, Bethesda, MD, 20892-0815, USA
SOURCE: Carbohydrate Research (1996), 288, 85-98
CODEN: CRBRAT; ISSN: 0008-6215
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Me 4-azido-3-O-benzyl-4,6-dideoxy-α-D-mannopyranoside was converted into disaccharide glycosides fragment of the terminus of the O-polysaccharide of Vibrio cholerae O:1.

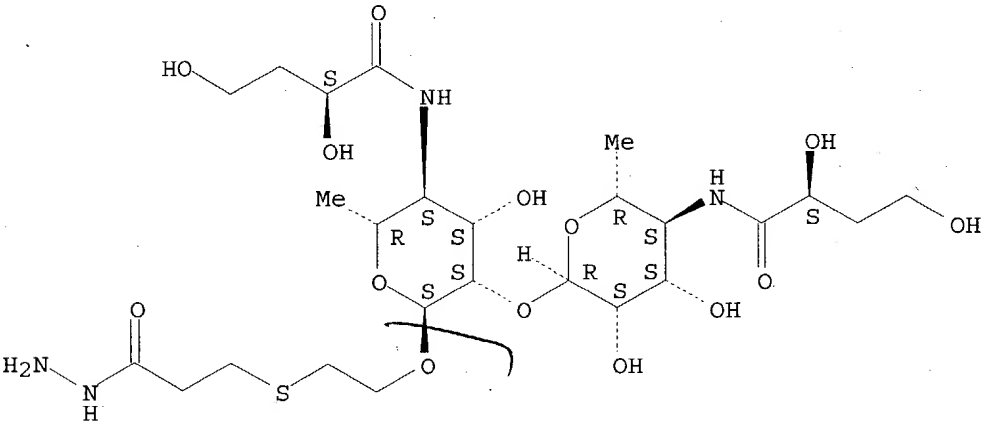
CC 33-7 (Carbohydrates)
IT 182273-70-7P **182273-73-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of glycosides of a disaccharide fragment representing the terminus of O-polysaccharide of Vibrio cholerae O:1)
IT **182273-73-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of glycosides of a disaccharide fragment representing the

terminus of O-polysaccharide of Vibrio cholerae O:1)

RN 182273-73-0 HCAPLUS

CN Propanoic acid, 3-[[2-[[4,6-dideoxy-2-O-[4,6-dideoxy-4-[(2,4-dihydroxy-1-oxobutyl)amino]-α-D-mannopyranosyl]-4-[(2,4-dihydroxy-1-oxobutyl)amino]-α-D-mannopyranosyl]oxy]ethyl]thio]-, hydrazide, [2(S),4(S)]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



L20 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:241713 HCAPLUS

DOCUMENT NUMBER: 122:75648

TITLE: A carbohydrate **biosensor** surface for the detection of uropathogenic bacteria

AUTHOR(S): Nilsson, Kurt G. I.; Mandenius, Carl-Fredrik

CORPORATE SOURCE: Lund, S-223 70, Swed.

SOURCE: Bio/Technology (1994), 12(13), 1376-8
CODEN: BTCHDA; ISSN: 0733-222X

PUBLISHER: Nature Publishing Co.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB We have developed a new surface for use in **biosensors** that is based on a gold plate covered with a specific carbohydrate receptor structure. The carbohydrate, Galα1-4Gal, was bound covalently via a thioalkylcarboxy-spacer, or adsorbed as a neoglycoprotein, to a two-dimensional gold surface. Both types of surfaces showed high specificity in the binding of the uropathogenic bacteria P-fimbriated Escherichia coli compared to the binding of non-infectious bacteria. The signal to noise ratio is sufficiently high to allow specific detection of the bacteria in **biosensor** applications.

CC 9-1 (Biochemical Methods)

ST carbohydrate **biosensor** surface uropathogenic bacteria detection

IT Escherichia coli
(P-fimbriated; carbohydrate **biosensor** surface for the detection of uropathogenic bacteria)

IT Albumins, uses
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(bovine,carbohydrate **biosensor** surface for the detection of uropathogenic bacteria)

IT **Biosensors**

(carbohydrate **biosensor** surface for the detection of uropathogenic bacteria)

IT Carbohydrates and Sugars, uses
RL: DEV (Device component use); USES (Uses)
(carbohydrate **biosensor** surface for the detection of uropathogenic bacteria)

IT Bacteria
(uropathogenic, carbohydrate **biosensor** surface for the detection of uropathogenic bacteria)

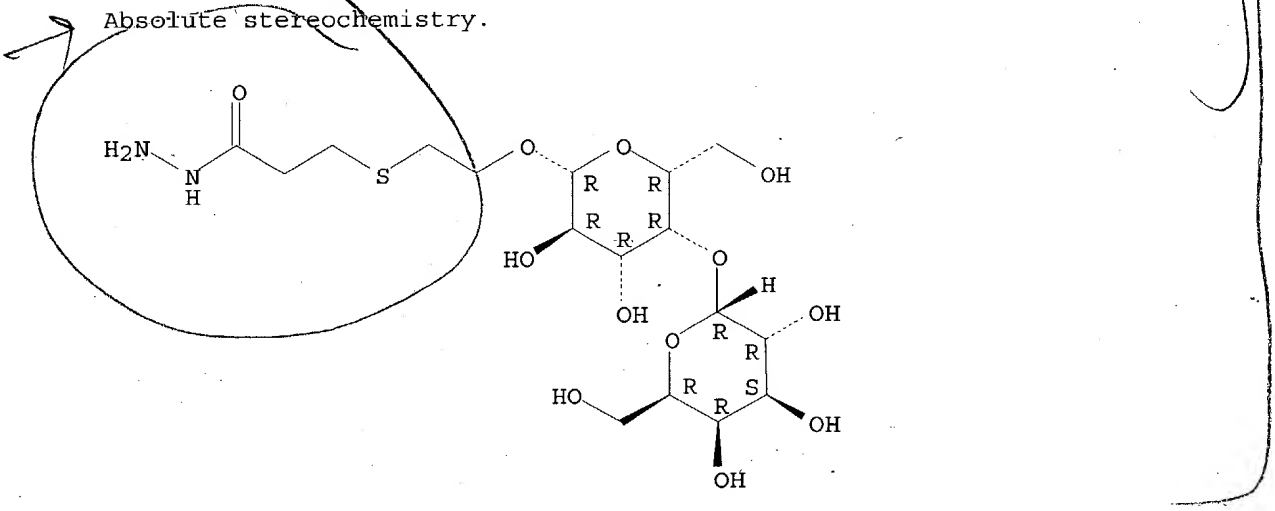
IT 7440-57-5, Gold, uses
RL: DEV (Device component use); USES (Uses)
(carbohydrate **biosensor** surface for the detection of uropathogenic bacteria)

IT **160294-57-5 160294-57-5D**, conjugate with bovine serum albumin
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(carbohydrate **biosensor** surface for the detection of uropathogenic bacteria)

IT **160294-57-5 160294-57-5D**, conjugate with bovine serum albumin
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(carbohydrate **biosensor** surface for the detection of uropathogenic bacteria)

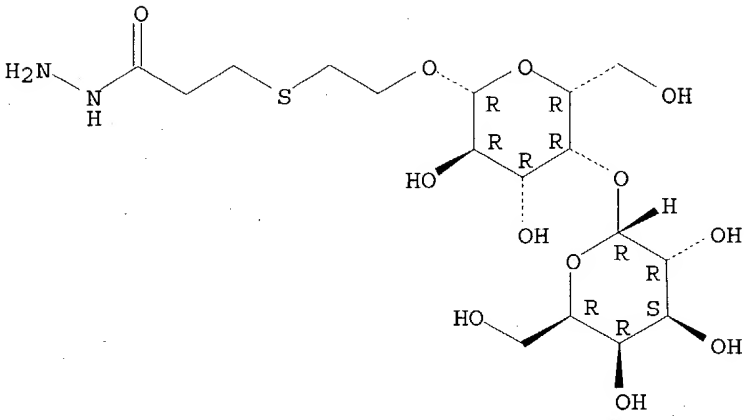
RN 160294-57-5 HCAPLUS
CN Propanoic acid, 3-[[2-[(4-O-α-D-galactopyranosyl-β-D-galactopyranosyl)oxy]ethyl]thio]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 160294-57-5 HCAPLUS
CN Propanoic acid, 3-[[2-[(4-O-α-D-galactopyranosyl-β-D-galactopyranosyl)oxy]ethyl]thio]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L20 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1989:587593 HCAPLUS
DOCUMENT NUMBER: 111:187593
TITLE: Amine derivatives of anthracycline antibiotics and antibody conjugates thereof and their preparation and use in treatment of cellular disorders
INVENTOR(S): King, Dalton H.; Coughlin, Daniel J.; Rodwell, John Dennis; Lopes, Anthony Dwight; Radcliffe, Robert David
PATENT ASSIGNEE(S): Cytogen Corp., USA
SOURCE: Eur. Pat. Appl., 41 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 294294	A2	19881207	EP 1988-401353	19880603
EP 294294	A3	19900530		
EP 294294	B1	19950517		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
US 4950738	A	19900821	US 1987-58440	19870605
US 5162512	A	19921110	US 1988-199549	19880527
WO 8809823	A1	19881215	WO 1988-US1909	19880603
W: AU, DK, FI, JP				
AU 8819549	A1	19890104	AU 1988-19549	19880603
ZA 8803956	A	19890222	ZA 1988-3956	19880603
JP 02500749	T2	19900315	JP 1988-505203	19880603
ES 2074055	T3	19950901	ES 1988-401353	19880603
DK 8900511	A	19890203	DK 1989-511	19890203
FI 8900559	A	19890206	FI 1989-559	19890206

PRIORITY APPLN. INFO.:
US 1987-58440 19870605
US 1988-199549 19880527
US 1982-356315 19820309
US 1984-650375 19840913
US 1984-650754 19840913
WO 1988-US1909 19880603

OTHER SOURCE(S): MARPAT 111:187593
AB Amine derivs. of antineoplastic anthracycline antibiotics (e.g. hydrazine, hydrazide, phenylhydrazine, etc. derivs. of daunorubicin, doxorubicin,

carminocyan, etc.) are prepared and covalently **attached** to an antibody or antibody fragment for treatment of cellular disorders, especially neoplasms. Adriamycin-HCl was reacted with adipic dihydrazide and the product (ADR-ADH) was conjugated with a murine monoclonal antibody B72.3 specific for an antigen of human adenocarcinoma (the oligosaccharide moiety of the antibody had been oxidized with NaIO4). Tumor (human colon adenocarcinoma, BL/CX-3) growth in nude mice treated i.v. with 6 μg ADR-ADH-B72.3 conjugate was significantly inhibited compared to the untreated group. The tumor inhibitory effect was equivalent to that seen in animals receiving 200 μg ADR alone. The inhibition lasted beyond the end of the treatment.

IC ICM C07H015-252
ICS A61K031-70; C07K015-00; A61K039-395; A61K047-00

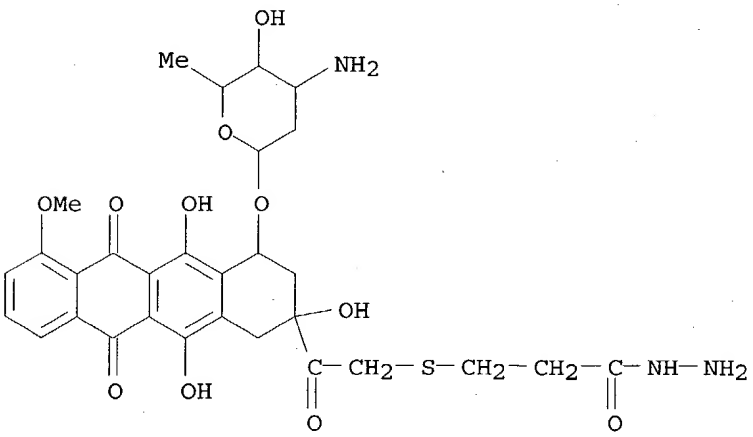
CC 1-6 (Pharmacology)
Section cross-reference(s): 9, 15

IT 23214-92-8DP, pentaglutamylhydrazide derivs., antibody conjugates
123105-65-7DP, antibody conjugates 123105-66-8DP, antibody conjugates
123105-67-9DP, antibody conjugates 123105-68-0DP, antibody conjugates
123105-69-1DP, antibody conjugates 123105-70-4DP, antibody conjugates
123105-71-5DP, antibody conjugates 123105-72-6DP, antibody conjugates
123105-73-7DP, antibody conjugates 123105-74-8DP, antibody conjugates
123105-75-9DP, antibody conjugates 123106-26-3DP, antibody conjugates
123129-58-8DP, antibody conjugates
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as neoplasm inhibitors)

IT **123129-58-8DP**, antibody conjugates
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as neoplasm inhibitors)

RN 123129-58-8 HCAPLUS

CN Propanoic acid, 3-[[2-[4-[(3-amino-2,3,6-trideoxy-α-L-lyxo-hexopyranosyl)oxy]-1,2,3,4,6,11-hexahydro-2,5,12-trihydroxy-7-methoxy-6,11-dioxo-2-naphthacenyl]-2-oxoethyl]thio]-, hydrazide, (2S-cis)- (9CI) (CA INDEX NAME)



L20 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1986:573419 HCAPLUS
DOCUMENT NUMBER: 105:173419
TITLE: Polyurethane ionic polymers with sulfide and semicarbazide groups in the macrochain

AUTHOR(S): Sukhorukova, S. A.; Navrotskaya, R. P.; Grekov, A. P.
CORPORATE SOURCE: Inst. Khim. Vysokomol. Soedin., Kiev, USSR
SOURCE: Ukrainskii Khimicheskii Zhurnal (Russian Edition) (1986), 52(5), 540-3
CODEN: UKZHAU; ISSN: 0041-6045
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB S-containing polyurethane ionenes prepared from polytetramethylene glycol, TDI or MDI, (H2NNHCO)2Z [Z= CH2CH(SR), O(CH2CH2SCH2CH2)2; R = alkyl], and (HOCH2CH2)2NMe with subsequent quaternization with HCl and optional alkylation with EtBr or Me2SO4 were more UV resistant than their nonsulfur analogs. No changes were observed in tensile strength, elongation, or viscosity after 100-h UV exposure. The photostabilizing influence of S was observed also for the nonquaternized polyurethanes. The S-containing fragments apparently generated weakly active radicals of the type RS·, which were capable of terminating the kinetic chain of degradation

CC 36-5 (Physical Properties of Synthetic High Polymers)

IT 72186-71-1D, quaternized 72186-72-2 72186-72-2D, quaternized 72186-74-4 72186-74-4D, quaternized 72196-93-1 72196-93-1D, quaternized 104935-10-6D, quaternized **104935-11-7D**, quaternized 104985-03-7 104985-04-8 104985-05-9 104985-06-0 **104985-08-2 104985-09-3 104985-10-6**
RL: PRP (Properties)
(UV stability of, physicomech. properties in relation to)

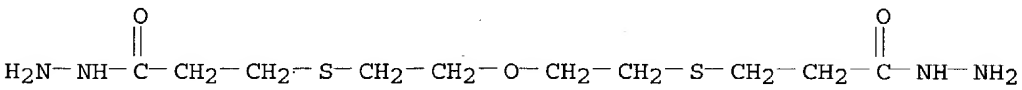
IT **104935-11-7D**, quaternized **104985-08-2** **104985-09-3 104985-10-6**
RL: PRP (Properties)
(UV stability of, physicomech. properties in relation to)

RN 104935-11-7 HCAPLUS

CN Propanoic acid, 3,3'-[oxybis(2,1-ethanediylthio)]bis-, dihydrazide, polymer with α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) and 2,2'-(methylimino)bis[ethanol] (9CI) (CA INDEX NAME)

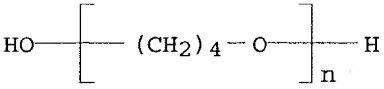
CM 1

CRN 92268-36-5
CMF C10 H22 N4 O3 S2



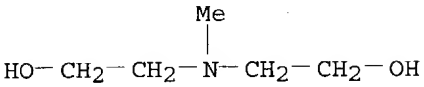
CM 2

CRN 25190-06-1
CMF (C4 H8 O)n H2 O
CCI PMS



CM 3

CRN 105-59-9
CMF C5 H13 N O2



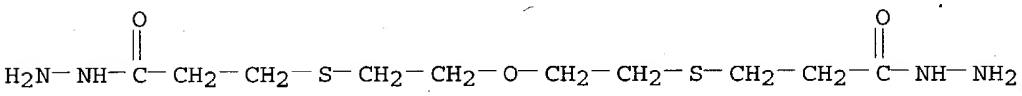
RN 104985-08-2 HCAPLUS
CN Propanoic acid, 3,3'-[oxybis(2,1-ethanediylthio)]bis-, dihydrazide, polymer with 1,3-diisocyanatomethylbenzene, α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) and 2,2'-(methylimino)bis[ethanol], hydrochloride (9CI) (CA INDEX NAME)

CM 1

CRN 104985-07-1
CMF (C10 H22 N4 O3 S2 . C9 H6 N2 O2 . C5 H13 N O2 . (C4 H8 O)n H2 O)x
CCI PMS

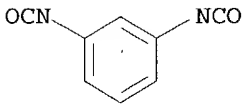
CM 2

CRN 92268-36-5
CMF C10 H22 N4 O3 S2



CM 3

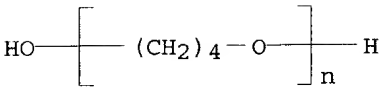
CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1—Me

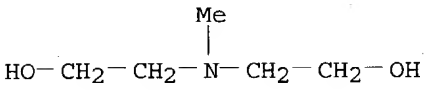
CM 4

CRN 25190-06-1
CMF (C4 H8 O)n H2 O
CCI PMS



CM 5

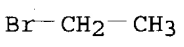
CRN 105-59-9
CMF C5 H13 N O2



RN 104985-09-3 HCAPLUS
CN Propanoic acid, 3,3'-[oxybis(2,1-ethanediylthio)]bis-, dihydrazide, polymer with 1,3-diisocyanatomethylbenzene, α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) and 2,2'-(methylimino)bis[ethanol], compd. with bromoethane, hydrochloride (9CI) (CA INDEX NAME)

CM 1

CRN 74-96-4
CMF C2 H5 Br

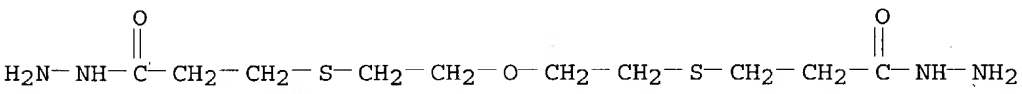


CM 2

CRN 104985-07-1
CMF (C10 H22 N4 O3 S2 . C9 H6 N2 O2 . C5 H13 N O2 . (C4 H8 O)n H2 O)x
CCI PMS

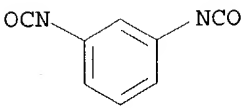
CM 3

CRN 92268-36-5
CMF C10 H22 N4 O3 S2



CM 4

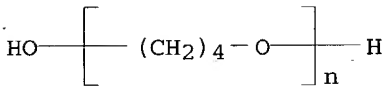
CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1-- Me

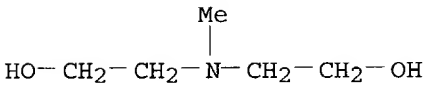
CM 5

CRN 25190-06-1
CMF (C4 H8 O)n H2 O
CCI PMS



CM 6

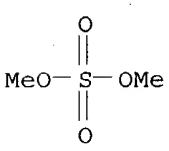
CRN 105-59-9
CMF C5 H13 N O2



RN 104985-10-6 HCAPLUS
CN Propanoic acid, 3,3'-[oxybis(2,1-ethanediylthio)]bis-, dihydrazide, polymer with 1,3-diisocyanatomethylbenzene, α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) and 2,2'-(methylimino)bis[ethanol], compd. with dimethyl sulfate, hydrochloride (9CI) (CA INDEX NAME)

CM 1

CRN 77-78-1
CMF C2 H6 O4 S



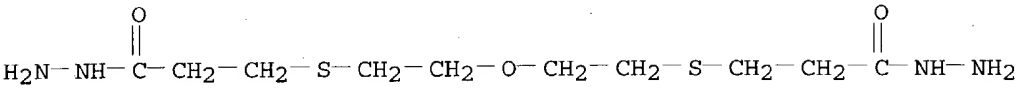
CM 2

CRN 104985-07-1
CMF (C10 H22 N4 O3 S2 . C9 H6 N2 O2 . C5 H13 N O2 . (C4 H8 O)n H2 O)x

CCI PMS

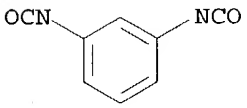
CM 3

CRN 92268-36-5
CMF C10 H22 N4 O3 S2



CM 4

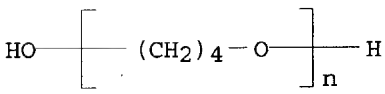
CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1—Me

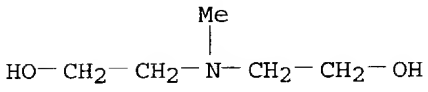
CM 5

CRN 25190-06-1
CMF (C4 H8 O)n H2 O
CCI PMS



CM 6

CRN 105-59-9
CMF C5 H13 N O2



L20 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1986:169828 HCAPLUS

DOCUMENT NUMBER: 104:169828
TITLE: Effect of UV irradiation on sulfur-containing poly(urethane semicarbazide)s
AUTHOR(S): Sukhorukova, S. A.; Navrotskaya, R. P.; Grekov, A. P.; Fedorenko, O. M.
CORPORATE SOURCE: Inst. Khim. Vysokomol. Soedin., Moscow, USSR
SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1986), 28(1), 111-16
CODEN: VYSAAF; ISSN: 0507-5475
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB S-containing polyurethane-polysemicarbazide (PUS) rubbers prepared from polytetramethylene glycol, MDI, and thiodicarboxylic acid dihydrazides, containing a sulfide group in the main chain or in a side group were more stable to UV degradation than similar polyurethanes not containing semicarbazide or S groups. The stabilizing influence of the semicarbazide groups was attributed to its antioxidant activity resulting from the presence of replaceable H atoms. The S-containing fragments stabilized through formation of RS radicals capable of terminating the kinetic chain of degradation Photodegrdn. of the S-containing PUS occurred only in the first 5-10 h of irradiation, after which the mech. properties increased in value then became constant with further irradiation

CC 39-7 (Synthetic Elastomers and Natural Rubber)

IT 9018-04-6 52484-70-5 95410-92-7 95410-93-8 101909-11-9 101909-12-0 101909-13-1 **101909-14-2**
RL: PRP (Properties)
(stability of, to photodegrdn. by UV irradiation, structure in relation to)

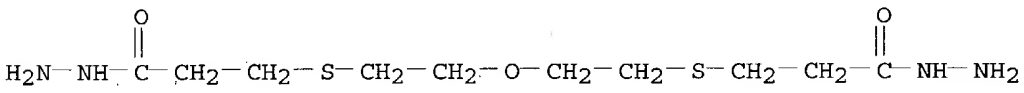
IT **101909-14-2**
RL: PRP (Properties)
(stability of, to photodegrdn. by UV irradiation, structure in relation to)

RN 101909-14-2 HCAPLUS

CN Propanoic acid, 3,3'-[oxybis(2,1-ethanediylthio)]bis-, dihydrazide, polymer with α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

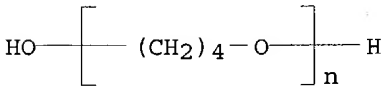
CM 1

CRN 92268-36-5
CMF C10 H22 N4 O3 S2



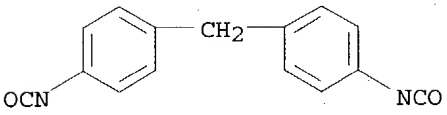
CM 2

CRN 25190-06-1
CMF (C4 H8 O)n H2 O
CCI PMS



CM 3

CRN 101-68-8
CMF C15 H10 N2 O2



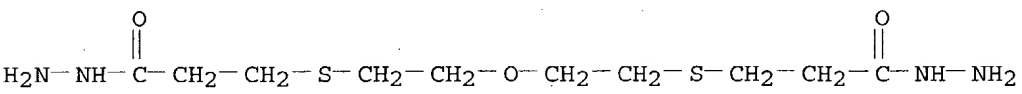
L20 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1985:168202 HCAPLUS
DOCUMENT NUMBER: 102:168202
TITLE: Flexible polyurethanes
INVENTOR(S): Sukhorukova, S. A.; Navrotskaya, R. P.; Grekov, A. P.; Tanchuk, Yu. V.; Kornienko, A. A.
PATENT ASSIGNEE(S): Institute of the Chemistry of High-Molecular-Weight Compounds, Academy of Sciences, Ukrainian S.S.R., USSR
SOURCE: U.S.S.R. From: Otkrytiya, Izobret. 1984, (48), 88-9. CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1131886	A1	19841230	SU 1983-3587911	19830309

PRIORITY APPLN. INFO.: SU 1983-3587911 19830309

AB Flexible polyurethanes are prepared by reacting oligoesters and diisocyanates and then adding chain extenders at a mol. ratio of oligomers/diisocyanates/chain extenders of 1:2-2.2:0.9-1.2. The UV light and low-temperature resistance of the polyurethanes is increased by using as a chain extender 1,5-diethylene oxide-S,S'-bis(mercaptopropionic acid) dihydrazide have the formula H2NHNCOCH2CH2-S-CH2CH2-O-CH2CH2-S-CH2CH2CONHNH2.

IC ICM C08G018-38
CC 39-12 (Synthetic Elastomers and Natural Rubber)
IT **92268-36-5DP**, polymers with polyesters and diisocyanates
RL: PREP (Preparation)
(oligomeric, rubber, manufacture of, light-and low-temperature-resistant)
IT **92268-36-5DP**, polymers with polyesters and diisocyanates
RL: PREP (Preparation)
(oligomeric, rubber, manufacture of, light-and low-temperature-resistant)
RN 92268-36-5 HCAPLUS
CN Propanoic acid, 3,3'-[oxybis(2,1-ethanediylthio)]bis-, dihydrazide (9CI) (CA INDEX NAME)



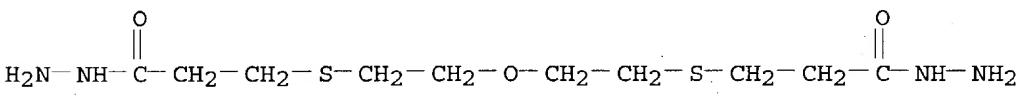
L20 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1984:552748 HCAPLUS
DOCUMENT NUMBER: 101:152748
TITLE: Thermal stability of sulfur-containing polyurethane semicarbazides
AUTHOR(S): Grekov, A. P.; Navrotskaya, R. P.; Zapunnaya, K. V.; Sukhorukova, S. A.; Fedorenko, O. M.
CORPORATE SOURCE: Inst. Khim. Vysokomol. Soedin., Kiev, USSR
SOURCE: Ukrainskii Khimicheskii Zhurnal (Russian Edition) (1984), 50(6), 659-63
CODEN: UKZHAU; ISSN: 0041-6045
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB Thermogravimetric anal., DTA, and IR spectroscopy was used to study the thermal properties of polyurethane semicarbazides (PUS) containing sulfide groups in the main or side chains, and the effect of sulfide fragments of dicarboxylic dihydrazides on the thermal stability (TS) of PUS. The PUS were prepared from oligomeric polytetramethylene glycol, TDI, and different dihydrazides in DMF solns. The oxidative TS of PUS was significantly higher than that of polyurethanes. The degradation activation energy (Ea) PUS was 106-325 kJ/mol of 240-510°. The highest Ea (325.1 kJ/mol) was observed for PUS with SC14H29 groups of the succinic dihydrazide. The TS of PUS depends on the chemical structure of the hydrazide, and especially on the structure of S-containing fragments.

CC 37-5 (Plastics Manufacture and Processing)
IT 90967-18-3 92268-33-2 92268-34-3 92268-35-4 **92268-37-6**
RL: USES (Uses)
(thermal and oxidative thermal stability of)
IT **92268-37-6**
RL: USES (Uses)
(thermal and oxidative thermal stability of)
RN 92268-37-6 HCAPLUS
CN Propanoic acid, 3,3'-[oxybis(2,1-ethanediylthio)]bis-, dihydrazide, polymer with 1,3-diisocyanatomethylbenzene and α-hydro-ω-hydroxypoly(oxy-1,4-butanediyl) (9CI) (CA INDEX NAME)

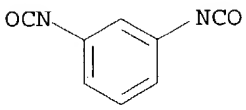
CM 1

CRN 92268-36-5
CMF C10 H22 N4 O3 S2



CM 2

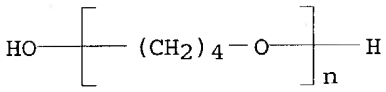
CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1—Me

CM 3

CRN 25190-06-1
CMF (C4 H8 O)n H2 O
CCI PMS

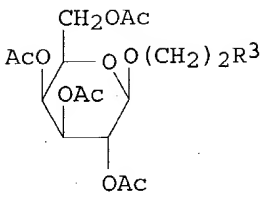


L20 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1984:423882 HCAPLUS
DOCUMENT NUMBER: 101:23882
TITLE: Glycosides and glycoconjugates
INVENTOR(S): Dahmen, Jan; Frejd, Torbjoern; Magnusson, Goeran; Noori, Ghazi
PATENT ASSIGNEE(S): Svenska Sockerfabriks AB, Swed.
SOURCE: Eur. Pat. Appl., 112 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

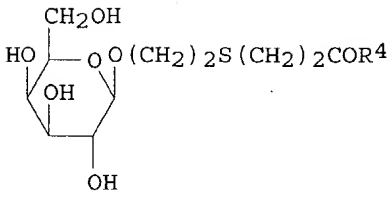
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 98252	A2	19840111	EP 1983-850176	19830621
EP 98252	A3	19840404		
EP 98252	B1	19890607		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
FI 8302254	A	19831224	FI 1983-2254	19830620
FI 78707	B	19890531		
FI 78707	C	19890911		
DK 8302842	A	19831224	DK 1983-2842	19830620
AT 43847	E	19890615	AT 1983-850176	19830621
JP 59025399	A2	19840209	JP 1983-111989	19830623
US 4675392	A	19870623	US 1984-673796	19841121

PRIORITY APPLN. INFO.: SE 1982-3925 19820623
US 1983-504154 19830614
EP 1983-850176 19830621

GI



I



II

AB Glycosides of the general formula (sugar)nO(CH2)mSRR1 [n = 1-10; m = 2-20; R = alkylene of ≤25 C atoms, arylene; R1 = H, CHO, NO2, NH2, OH, SH, CO2H, CO2Me, CO2Et, CONHNH2, CON3, CH(OR2)2, (R2 = C1-4 alkyl)] were prepared and some of them were converted into glycoconjugates. Thus, glycoside I (R3 = Br), prepared from HO(CH2)2Br and the corresponding sugar peracetate, was treated with HS(CH2)2CO2Me to give I [R3 = S(CH2)2CO2Me]. The latter was deacetylated to give glycoside II (R4 = OMe), which was treated with H2NNH2 to give II (R4 = NHNH2), which was coupled to bovine serum albumin by the acyl azide method to give the corresponding conjugate II (R4 = bovine serum albumin).

IC C07H015-04; C07H003-06; C07H003-04; C07G007-00; C07G017-00

CC 33-3 (Carbohydrates)
Section cross-reference(s): 6

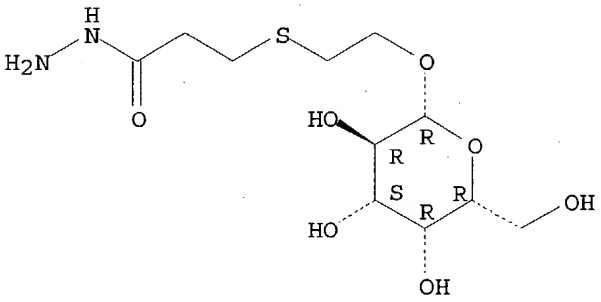
IT **90214-63-4P 90214-66-7P 90214-86-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and coupling of, with albumin)

IT **90214-63-4P 90214-66-7P 90214-86-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and coupling of, with albumin)

RN 90214-63-4 HCAPLUS

CN Propanoic acid, 3-[[2-(β-D-galactopyranosyloxy)ethyl]thio]-, hydrazide (9CI) (CA INDEX NAME)

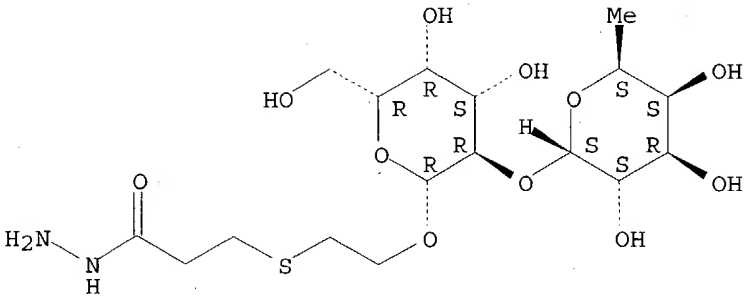
Absolute stereochemistry.



RN 90214-66-7 HCAPLUS

CN Propanoic acid, 3-[[2-[[2-O-(6-deoxy-α-L-galactopyranosyl)-β-D-galactopyranosyl]oxy]ethyl]thio]-, hydrazide (9CI) (CA INDEX NAME)

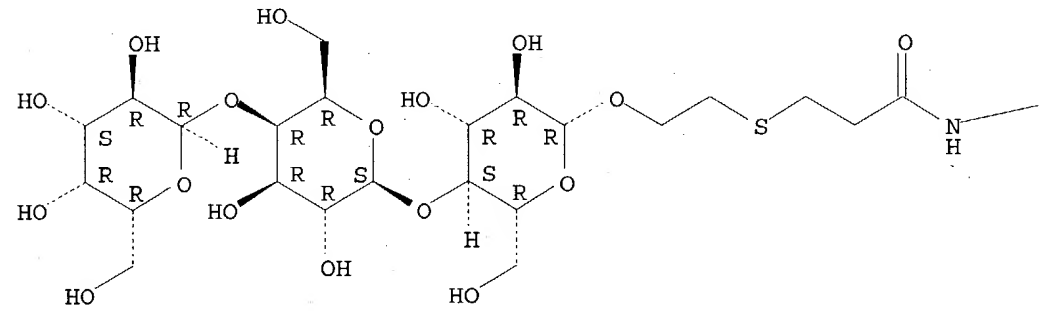
Absolute stereochemistry.



RN 90214-86-1 HCAPLUS
CN Propanoic acid, 3-[[2-[(O-α-D-galactopyranosyl-(1→4)-O-β-D-galactopyranosyl-(1→4)-β-D-glucopyranosyl)oxy]ethyl]thio]-, hydrazide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

—NH_2

L20 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1981:41138 HCAPLUS
DOCUMENT NUMBER: 94:41138
TITLE: Studies on structure-activity relation of TAPHA-type compounds as monoamine oxidase inhibitors
AUTHOR(S): Wang, Yu-Ee; Xu, Fu-Ben; Chen, Chi-Hao; Jin, Guo-Zhang
CORPORATE SOURCE: Shanghai Inst. Mater. Med., Acad. Sin., Shanghai, Peop. Rep. China
SOURCE: Yaoxue Xuebao (1980), 15(3), 147-52
CODEN: YHHPAL; ISSN: 0513-4870
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The title compds. X[(CH2)nCONHNHR]2 I (R = CHMe2, Bu, CH2Ph, CH2CH2Ph, etc.; X = O, S, OCH2CH2O, RN; n = 1 or 2) were evaluated as monoamine oxidase [9001-66-5] inhibitors. The ED50 and LD50 of several compds. in

mice is given. I (R = Bu, X = S, n = 2) [1001-39-4] had the lowest ED50 (2 mg/kg) and TAPHA [I (R = CHMe2, X = S, n = 2)] [1689-03-8] was the least toxic. Structure-activity relations are discussed.

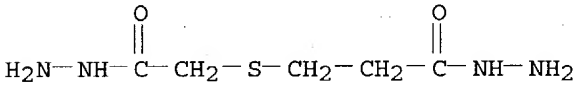
CC 1-3 (Pharmacodynamics)
Section cross-reference(s): 7

IT 999-25-7 999-27-9 999-45-1 1001-28-1 1001-35-0 1001-37-2
1001-38-3 1001-39-4 1001-41-8 1001-85-0 1027-27-6 1030-58-6
1033-66-5 1050-21-1 1054-53-1 1054-54-2 1057-51-8 1070-55-9
1070-56-0 1071-54-1 1071-61-0 1071-68-7 1100-68-1 1100-69-2
1102-36-9 1103-69-1 1103-72-6 1105-57-3 1190-60-9 1241-05-0
1248-93-7 1250-79-9 1689-03-8 6292-68-8 6292-69-9 75487-18-2
75487-19-3 **75487-20-6** 75487-21-7 75487-22-8 75487-23-9
75487-24-0 75487-25-1 75487-26-2 75487-27-3 75487-28-4
75487-29-5 75487-30-8 75487-31-9 75487-32-0 75499-16-0
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(monoamine oxidase-inhibiting activity of)

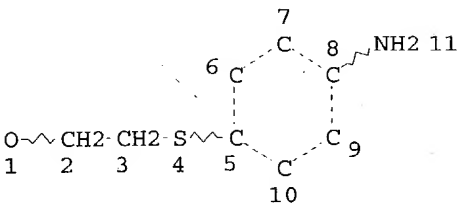
IT **75487-20-6**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(monoamine oxidase-inhibiting activity of)

RN 75487-20-6 HCAPLUS

CN Propanoic acid, 3-[(2-hydrazino-2-oxoethyl)thio]-, hydrazide (9CI) (CA INDEX NAME)



=> d que
L15 STR



-O Et SPh NH2

and biosensor

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE
L17 166 SEA FILE=REGISTRY SSS FUL L15
L21 12343 SEA FILE=HCAPLUS ABB=ON PLU=ON BIOSENSORS/CT
L25 847 SEA FILE=HCAPLUS ABB=ON PLU=ON L17
L28 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND (L21 OR BIOSENS? OR BIO?(5A)?SENSOR? OR BIOCHIP?)

=> d ibib abs hitind hitstr

L28 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:424393 HCAPLUS
DOCUMENT NUMBER: 127:158681
TITLE: Synthesis of a surface-active polyamic acid with pendant biological linker molecule for specific immobilization of antibodies
AUTHOR(S): Watson, Hazel; Peltonen, Jouko
CORPORATE SOURCE: Department of Physical Chemistry, Abo Akademi University, Porthansgatan 3-5, FIN-20500, Turku, Finland
SOURCE: Sensors and Actuators, B: Chemical (1997), B39(1-3), 261-265
CODEN: SABCEB; ISSN: 0925-4005
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The characterization of a novel amphiphilic polyamic acid derivative intended for use in **biosensor** applications is reported. The surface-active polymer, synthesized from a modified diamine and 1,2,4,5-benzenetetracarboxylic dianhydride (pyromellitic dianhydride), comprises a polymer backbone with pendant functional groups, capable of specific immobilization of antibodies. The polymer is rendered amphiphilic by reaction with octadecylamine in a stoichiometric ratio of 1:2, i.e., equimolar ratios of acid and amine functionality. The Langmuir monolayer is expected to be capable of specifically and effectively immobilizing antibody fragments introduced into the subphase. Anal. of the chemical structure of the polymer mol. of various mol. wts. and characterization of the monolayer are presented.
CC 9-10 (Biochemical Methods)

Section cross-reference(s): 15

ST polymer immobilization antibody **biosensor**

IT **Biosensors**
Immobilization
Langmuir films
(synthesis of surface-active polyamic acid with pendant biol. linker mol. for specific immobilization of antibodies)

IT **193539-15-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with octadecylamine)

IT **193539-18-3P**
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation and use in **biosensor** preparation for antibody immobilization)

IT **193539-13-8P**
RL: BUU (Biological use, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation as linker mol. in **biosensor** preparation for antibody immobilization)

IT **96727-40-1**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with pyromellitic anhydride)

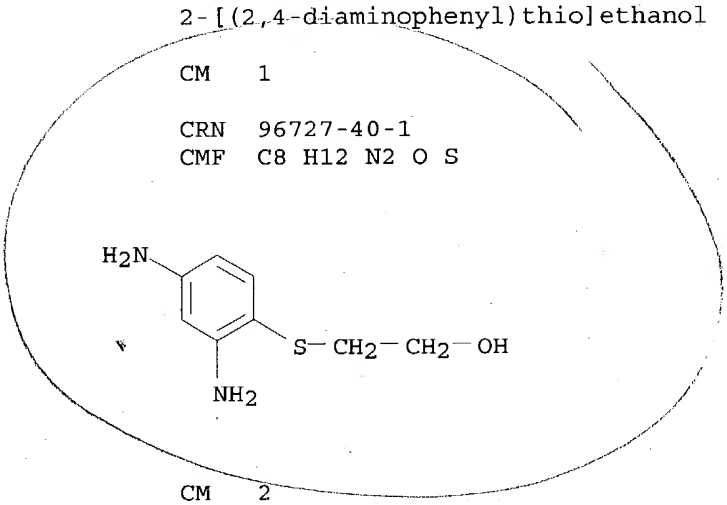
IT **193539-15-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with octadecylamine)

RN 193539-15-0 HCAPLUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 2-[(2,4-diaminophenyl)thio]ethanol (9CI) (CA INDEX NAME)

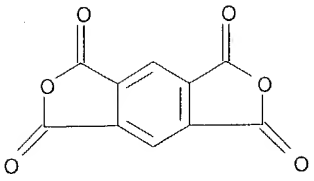
CM 1

CRN 96727-40-1
CMF C8 H12 N2 O S



CM 2

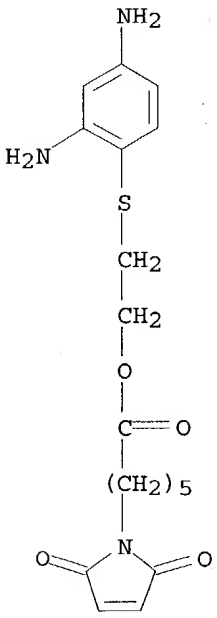
CRN 89-32-7
CMF C10 H2 O6



IT **193539-18-3P**
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation and use in **biosensor** preparation for antibody immobilization)
RN 193539-18-3 HCAPLUS
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 2-[(2,4-diaminophenyl)thio]ethyl 2,5-dihydro-2,5-dioxo-1H-pyrrole-1-hexanoate (9CI) (CA INDEX NAME)

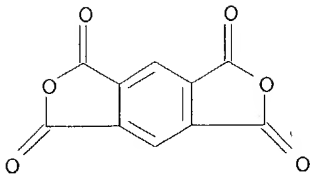
CM 1

CRN 193539-17-2
CMF C18 H23 N3 O4 S

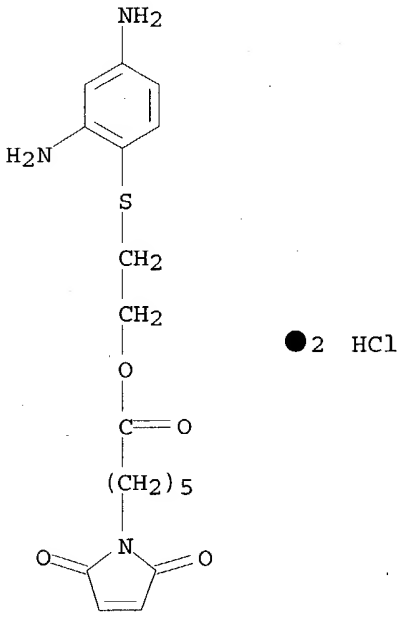


CM 2

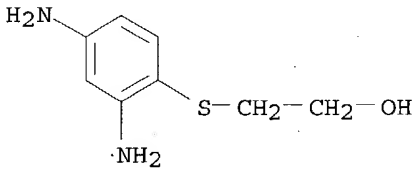
CRN 89-32-7
CMF C10 H2 O6



IT **193539-13-8P**
RL: BUU (Biological use, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation as linker mol. in **biosensor** preparation for antibody immobilization)
RN 193539-13-8 HCAPLUS
CN 1H-Pyrrole-1-hexanoic acid, 2,5-dihydro-2,5-dioxo-, 2-[(2,4-diaminophenyl)thio]ethyl ester, dihydrochloride (9CI) (CA INDEX NAME)



IT **96727-40-1**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with pyromellitic anhydride)
RN 96727-40-1 HCAPLUS
CN Ethanol, 2-[(2,4-diaminophenyl)thio]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 STR

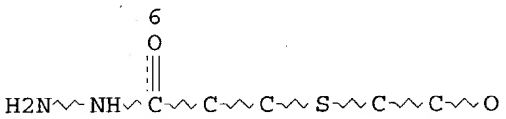
$-NHCOCH_2CH_2S-$

AND Biosensor

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE
L8 9777 SEA FILE=REGISTRY SSS FUL L5
L9 STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
L10 17 SEA FILE=REGISTRY SUB=L8 SSS FUL L9
L18 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L10
L19 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 AND (IMMOBIL? OR COAT? OR ATTACH? OR BIOSENS? OR BIOCHIP? OR BIO?(2A)?SENS?)
L20 10 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 OR L19
L21 12343 SEA FILE=HCAPLUS ABB=ON PLU=ON BIOSENSORS/CT
L22 34 SEA FILE=HCAPLUS ABB=ON PLU=ON L21 AND L8
L23 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L22 AND ?CARBOHYDR?
L24 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L23 NOT L20

=> d l24 ibib abs hitind hitstr 1-6

L24 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:555756 HCAPLUS
DOCUMENT NUMBER: 137:121864
TITLE: Biosensor with covalently attached membrane-spanning proteins
INVENTOR(S): Lakey, Jeremy Hugh
PATENT ASSIGNEE(S): Newcastle University Ventures Limited, UK
SOURCE: PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002057780	A1	20020725	WO 2002-GB222	20020118
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1352245	A1	20031015	EP 2002-732154	20020118
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2004096895	A1	20040520	US 2003-250682	20031017

PRIORITY APPLN. INFO.:
GB 2001-1279 A 20010118
GB 2001-8947 A 20010410
WO 2002-GB222 W 20020118

AB The invention concerns a product comprising: a membrane-spanning protein; a lipid membrane formed from amphiphilic mols. and membrane-spanning protein mols.; and a substrate: characterized in that the membrane protein is directly coupled to the substrate. The invention also provides a method for producing such a product which (i) comprises treating a substrate with a hydrophilic coating agent; (ii) providing at least one membrane-spanning protein; (iii) bringing the protein into contact with the treated substrate under conditions for the coupling of the protein directly to the treated substrate; (iv) adding amphiphilic mols. to the protein-coupled substrate to form a lipid membrane. The product is useful for biosensors, protein arrays and the like.

IC ICM G01N033-543
ICS C12Q001-00; G01N027-333
CC 9-1 (Biochemical Methods).
Section cross-reference(s): 6
IT Actinobacillus pleuropneumoniae
Aeromonas
Aeromonas salmonicida
Amphiphiles
Antibiotics
Aquifex aeolicus
Bartonella bacilliformis
Biosensors
Bordetella avium
Bordetella pertussis
Borrelia burgdorferi
Brucella
Brucella melitensis
Burkholderia cepacia
Calymmatobacterium granulomatis
Chlamydia
Chlamydia trachomatis
Chlamydophila pneumoniae
Citrobacter freundii
Coating materials

Comamonas acidovorans
Drugs
Ectothiorhodospira vacuolata
Eikenella corrodens
Enterobacter aerogenes
Enterobacter cloacae
Escherichia
Escherichia coli
Escherichia fergusonii
Escherichia hermannii
Escherichia vulneris
Genetic methods
Haemophilus
Haemophilus actinomycetemcomitans
Haemophilus ducreyi
Haemophilus influenzae
Haemophilus parainfluenzae
Helicobacter pylori
Histophilus somni
Hydrophilicity
Immobilization, molecular or cellular
Ionophores
Klebsiella oxytoca
Klebsiella pneumoniae
Legionella pneumophila
Leptothrix discophora
Mannheimia haemolytica
Methylococcus capsulatus
Moraxella catarrhalis
Mutation
Neisseria flavescens
Neisseria gonorrhoeae
Neisseria lactamica
Neisseria meningitidis
Neisseria polysaccharea
Neisseria sicca
Pasteurella multocida
Pesticides
Photobacterium profundum
Pseudomonas aeruginosa
Pseudomonas fluorescens
Pseudomonas putida
Pseudomonas syringae
Rahnella aquatilis
Rhodobacter blasticus
Rhodobacter capsulatus
Rickettsia prowazeki
Salmonella typhi
Salmonella typhimurium
Self-assembled monolayers
Serratia marcescens
Serratia odorifera
Shigella
Siler
Sinorhizobium meliloti
Siphoviridae
Sulfhydryl group
Thermotoga maritima
Treponema pallidum

Treponema phagedenis
Vibrio alginolyticus
Vibrio cholerae
Vibrio parahaemolyticus
Xenorhabdus nematophila
Yersinia enterocolitica
Yersinia pestis
α-Helix
β-Barrel
(biosensor with covalently attached membrane-spanning proteins)

IT Amino acids, analysis
Antibodies
Carbohydrates, analysis
DNA
Fatty acids, analysis
Hormones, animal, analysis
Ligands
Nucleic acids
Peptide nucleic acids
RNA
Receptors
Steroids, analysis
cDNA
RL: ANT (Analyte); ANST (Analytical study)
(biosensor with covalently attached membrane-spanning proteins)

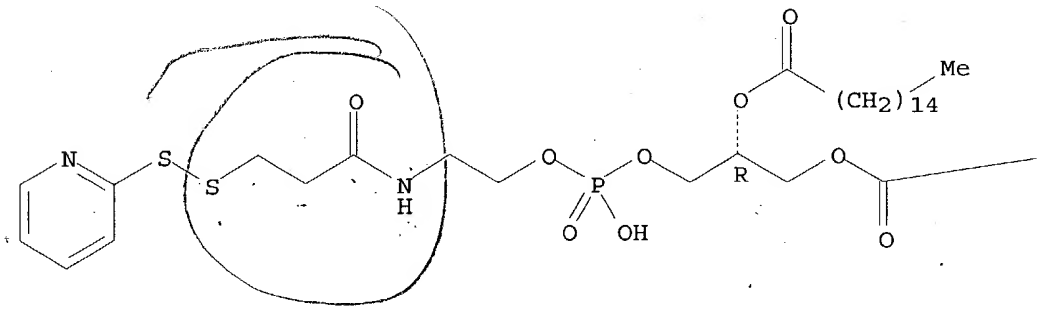
IT 52-90-4, Cysteine, properties **87707-01-5** 102281-30-1
186133-87-9 202529-31-5 443299-05-6
RL: PRP (Properties)
(biosensor with covalently attached membrane-spanning proteins)

IT **87707-01-5 186133-87-9**
RL: PRP (Properties)
(biosensor with covalently attached membrane-spanning proteins)

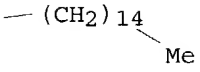
RN 87707-01-5 HCAPLUS
CN Hexadecanoic acid, (1R)-1-[3-hydroxy-3-oxido-8-oxo-10-(2-pyridinyldithio)-2,4-dioxa-7-aza-3-phosphadec-1-yl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



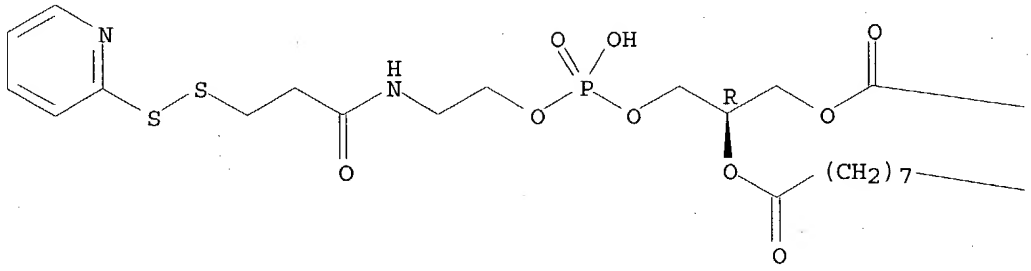
PAGE 1-B



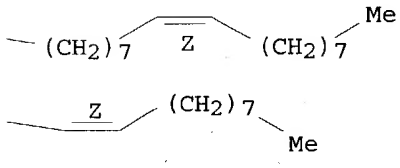
RN 186133-87-9 HCAPLUS
CN 9-Octadecenoic acid (9Z)-, (1R)-1-[3-hydroxy-3-oxido-8-oxo-10-(2-pyridinyldithio)-2,4-dioxa-7-aza-3-phosphadec-1-yl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:731334 HCAPLUS
DOCUMENT NUMBER: 135:269619
TITLE: Colorimetric glycopolythiophene biosensors
INVENTOR(S): Charych, Deborah J.; Myung-Gi-Baek, Deborah J.
PATENT ASSIGNEE(S): The Regents of the University of California, USA
SOURCE: U.S. Pat. Appl. Publ., 38 pp., Cont.-in-part of U.S. Ser. No. 461,509.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 11
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001026915	A1	20011004	US 2000-734410	20001211
US 6660484	B2	20031209		
US 6001556	A	19991214	US 1996-592724	19960126
US 6183772	B1	20010206	US 1996-609312	19960301
US 6022748	A	20000208	US 1997-920501	19970829
US 6080423	A	20000627	US 1997-944257	19971006
US 6180135	B1	20010130	US 1997-944323	19971006
US 6468759	B1	20021022	US 1998-33557	19980302
US 6306598	B1	20011023	US 1999-337973	19990621
US 6395561	B1	20020528	US 1999-461509	19991214
US 6485987	B1	20021126	US 2000-500295	20000208

PRIORITY APPLN. INFO.:

US 1992-976697 B2 19921113
US 1993-159927 B2 19931130
US 1994-289384 B2 19940811
US 1994-328237 B2 19941024
US 1995-389475 B2 19950213
US 1998-23898 B3 19950213
US 1996-592724 A3 19960126
US 1996-609312 A2 19960301
US 1997-38383P P 19970214
US 1997-39749P P 19970303
US 1997-50496P P 19970623
US 1997-920501 A3 19970829
US 1997-944323 A2 19971006
US 1998-33557 A2 19980302
US 1998-103344 A2 19980623
US 1999-337973 A2 19990621
US 1999-170190P P 19991210
US 1999-461509 A2 19991214
US 2000-500295 A2 20000208
US 1992-982189 B2 19921125
US 1997-944257 A3 19971006
US 1998-90266P P 19980622

AB The present invention relates to methods and compns. for the direct detection of analytes using observable spectral changes in biopolymeric systems. In particular, the present invention allows for the direct colorimetric detection of analytes using color changes that occur in glycopolythiophene polymer systems in response to selective binding of analytes.

IC C12Q001-70; G01N033-554; G01N033-569; A61L002-00; B32B027-04
NCL 435005000
CC 9-1 (Biochemical Methods)
IT Agglutinins and Lectins
Antibodies
Antigens
Biopolymers
Carbohydrates, uses
Cardiolipins
Ceramides
Cerebrosides
Enzymes, uses
Gene
Hormones, animal, uses
Ligands

Lysophosphatidylcholines
Nucleic acids
Phosphatidic acids
Phosphatidylcholines, uses
Phosphatidylethanolamines, uses
Phosphatidylglycerols
Phosphatidylinositols
Phosphatidylserines
Polymers, uses
Polyoxyalkylenes, uses
Proteins, general, uses
Receptors
Sialic acids
Sphingomyelins
Steroids, uses
Trisaccharides
Volatile organic compounds
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(colorimetric glycopolythiophene biosensors)

IT **Biosensors**
(colorimetric glycopolythiophene; colorimetric glycopolythiophene biosensors)

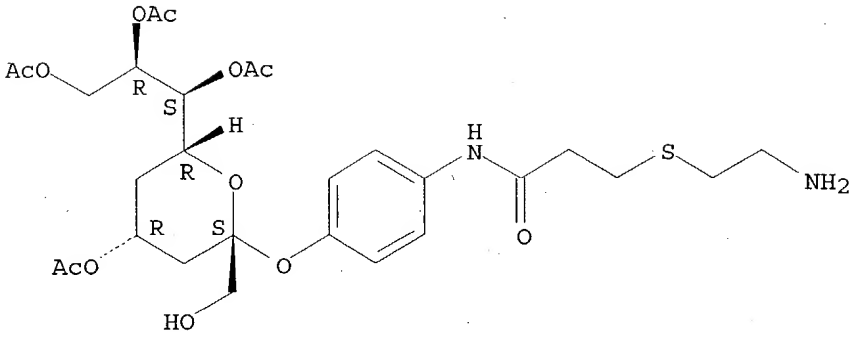
IT 56-12-2, 4-Aminobutanoic acid, reactions 60-32-2, 6-Aminocaproic acid 107-15-3, Ethylenediamine, reactions 373-44-4, 1,8-Octanediamine 4781-83-3, 2-Iminothiolane hydrochloride 6066-82-6, n-Hydroxysuccinimide 6964-21-2, Thiophene-3-acetic acid 7087-68-5, Diisopropylethylamine 7719-09-7, thionyl chloride 34213-86-0 39001-23-5 58414-52-1 69492-74-6, Thiophene acetic acid 88829-82-7 125700-67-6, Tbtu 187146-99-2 187147-00-8 363620-44-4 **363620-46-6** 363620-47-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(colorimetric glycopolythiophene biosensors)

IT 81253-66-9P 114815-74-6P 321850-00-4P 321850-01-5P 321850-02-6P 321850-03-7P 321850-40-2P 321850-42-4P 321850-44-6P 363620-33-1P 363620-35-3P 363620-37-5P **363620-39-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(colorimetric glycopolythiophene biosensors)

IT **363620-46-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(colorimetric glycopolythiophene biosensors)

RN 363620-46-6 HCAPLUS
CN Propanamide, 3-[(2-aminoethyl)thio]-N-[4-[(4,7,8,9-tetra-O-acetyl-3,5-dideoxy-α-D-gluco-2-nonulopyranosyl)oxy]phenyl]- (9CI) (CA INDEX NAME)

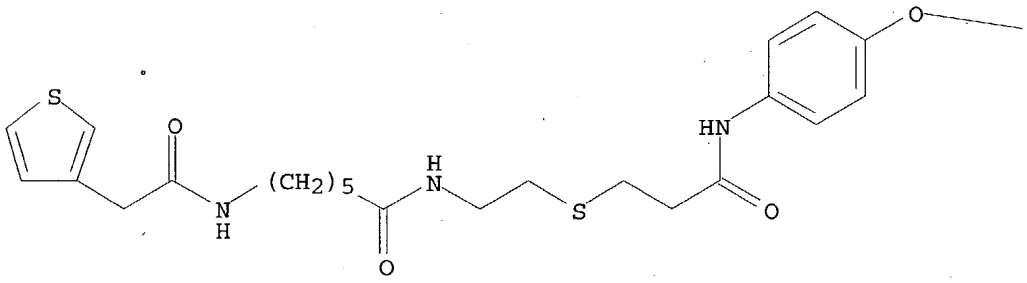
Absolute stereochemistry.



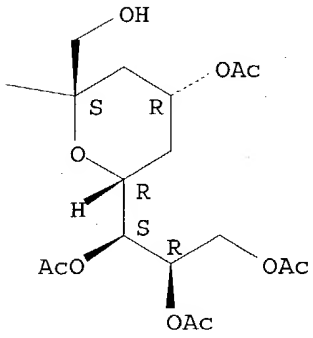
IT **363620-39-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(colorimetric glycopolythiophene biosensors)
RN 363620-39-7 HCAPLUS
CN 3-Thiopheneacetamide, N-[6-oxo-6-[[2-[[3-oxo-3-[[4-[(4,7,8,9-tetra-O-acetyl-3,5-dideoxy-α-D-gluco-2-nonulopyranosyl)oxy]phenyl]amino]propyl]thio]ethyl]amino]hexyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

PAGE 1-A



PAGE 1-B



L24 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:421409 HCAPLUS
DOCUMENT NUMBER: 133:40210
TITLE: Patterned deposition of antibody-binding proteins for optical diffraction-based biosensors
INVENTOR(S): McGrath, Kevin; Kaylor, Rosann M.; Everhart, Dennis S.
PATENT ASSIGNEE(S): Kimberly-Clark Worldwide, Inc., USA
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000036416	A1	20000622	WO 1999-US27727	19991122
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2001055754	A1	20011227	US 1998-213713	19981217
US 6579673	B2	20030617		
EP 1141709	A1	20011010	EP 1999-960563	19991122
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AU 762900	B2	20030710	AU 2000-17431	19991122

PRIORITY APPLN. INFO.: US 1998-213713 A 19981217
WO 1999-US27727 W 19991122

AB The present invention provides an inexpensive and sensitive device and method for detecting and quantifying analytes present in a medium. The device comprises a metalized film upon which is printed a specific, predetd. pattern of an antibody-binding protein. Upon attachment of a target analyte to select areas of the plastic film upon which the protein is printed, diffraction of transmitted and/or reflected light occurs via the phys. dimensions and defined, precise placement of the analyte. A diffraction image is produced which can be easily seen with the eye or, optionally, with a sensing device. An immunosensor for LH had immobilized protein A printed on a gold/Mylar film. The sensor was reacted with monoclonal antibody to LH β.

IC ICM G01N033-543
ICS G01N021-47
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 2, 15
IT **Biosensors**
(immunol., optical, for LH; patterned deposition of antibody-binding proteins for optical diffraction-based biosensors)
IT **Biosensors**
(immunosensors, optical, for LH; patterned deposition of antibody-binding proteins for optical diffraction-based biosensors)
IT Bacteria (Eubacteria)
Biosensors
Candida
Cellophane
Drugs

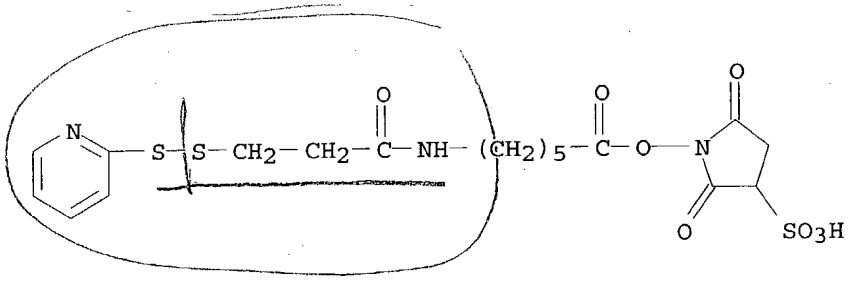
Drugs of abuse
Environmental analysis
Escherichia coli
Films
Fungi
Microspheres
Optical diffraction
Salmonella
Streptococcus pneumoniae
Virus
Yeast
(patterned deposition of antibody-binding proteins for optical diffraction-based biosensors)

IT Allergens
Antibodies
Carbohydrates, analysis
Carcinoembryonic antigen
Enzymes, analysis
Haptens
Hormones, animal, analysis
Lipids, analysis
Nucleic acids
Polysaccharides, analysis
Proteins, general, analysis
Rheumatoid factors
RL: ANT (Analyte); ANST (Analytical study)
(patterned deposition of antibody-binding proteins for optical diffraction-based biosensors)

IT **150244-18-1**
RL: RCT (Reactant); RACT (Reactant or reagent)
(thiolation with; patterned deposition of antibody-binding proteins for optical diffraction-based biosensors)

IT **150244-18-1**
RL: RCT (Reactant); RACT (Reactant or reagent)
(thiolation with; patterned deposition of antibody-binding proteins for optical diffraction-based biosensors)

RN 150244-18-1 HCAPLUS
CN 3-Pyrrolidinesulfonic acid, 2,5-dioxo-1-[[1-oxo-6-[[1-oxo-3-(2-pyridinyldithio)propyl]amino]hexyl]oxy]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:402097 HCAPLUS
DOCUMENT NUMBER: 133:40221
TITLE: Patterned binding of functionalized microspheres for optical diffraction-based biosensors
INVENTOR(S): Everhart, Dennis S.; Kaylor, Rosann M.; McGrath, Kevin

PATENT ASSIGNEE(S): Kimberly-Clark Worldwide, Inc., USA
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000034781	A2	20000615	WO 1999-US27671	19991122
WO 2000034781	A3	20000817		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6221579	B1	20010424	US 1998-210016	19981211
EP 1137942	A2	20011004	EP 1999-961755	19991122
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AU 759582	B2	20030417	AU 2000-18271	19991122
US 2001004526	A1	20010621	US 2000-733204	20001208
US 6573040	B2	20030603		

PRIORITY APPLN. INFO.: US 1998-210016 A 19981211
WO 1999-US27671 W 19991122

AB The present invention provides an inexpensive and sensitive system and method for detecting analytes present in a medium. The system comprises a diffraction enhancing element, such as functionalized microspheres, which are modified such that they are capable of binding with a target analyte. Addnl., the system comprises a polymer film, which may include a metal coating, upon which is printed a specific, predetd. pattern of analyte-specific receptors. Upon attachment of a target analyte to select areas of the polymer film, either directly or with the diffraction enhancing element, diffraction of transmitted and/or reflected light occurs via the phys. dimensions and defined, precise placement of the analyte. A diffraction image is produced which can be easily seen with the eye or, optionally, with a sensing device. Blue polystyrene particles were conjugated with monoclonal antibody. A gold/Mylar film was blocked with β-casein and then antibody was immobilized in a pattern on the surface. LH sample was mixed with the microparticles and then applied to the sensor. A nitrocellulose disk with a small hole in the center was used to wick away excess fluid and unbound microparticles. A point light source was transmitted through the hole and sensor to create a diffraction image on the other side.

IC ICM G01N033-53
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 2, 3, 15
IT **Biosensors**
(immunol., optical, for LH; patterned binding of functionalized microspheres for optical diffraction-based biosensors)
IT **Biosensors**
(immunosensors, optical, for LH; patterned binding of functionalized microspheres for optical diffraction-based biosensors)
IT Bacteria (Eubacteria)

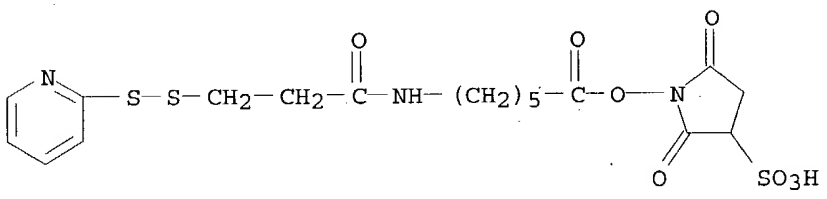
Biosensors
Candida albicans
Cellophane
Chelating agents
Drugs
Drugs of abuse
Environmental analysis
Escherichia coli
Films
Fungi
Microspheres
Optical diffraction
Scanning electron microscopy
Streptococcus pneumoniae
Surfactants
Virus
Yeast
(patterned binding of functionalized microspheres for optical diffraction-based biosensors)

IT Antibodies
Antigens
Carbohydrates, analysis
Enzymes, analysis
Hormones, animal, analysis
Lipids, analysis
Nucleic acids
Polysaccharides, analysis
Proteins, general, analysis
RL: ANT (Analyte); ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(patterned binding of functionalized microspheres for optical diffraction-based biosensors)

IT **150244-18-1**
RL: RCT (Reactant); RACT (Reactant or reagent)
(thiolation with; patterned binding of functionalized microspheres for optical diffraction-based biosensors)

IT **150244-18-1**
RL: RCT (Reactant); RACT (Reactant or reagent)
(thiolation with; patterned binding of functionalized microspheres for optical diffraction-based biosensors)

RN 150244-18-1 HCAPLUS
CN 3-Pyrrolidinesulfonic acid, 2,5-dioxo-1-[[1-oxo-6-[[1-oxo-3-(2-pyridinyldithio)propyl]amino]hexyl]oxy]- (9CI) (CA INDEX NAME)



L24 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:405159 HCAPLUS
DOCUMENT NUMBER: 131:41789
TITLE: Optical diffraction biosensor

INVENTOR(S): Everhart, Dennis S.; Jones, Mark L.; Kaylor, Rosann Marie
PATENT ASSIGNEE(S): Kimberly-Clark Worldwide, Inc., USA
SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9931486	A1	19990624	WO 1998-US26759	19981216
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6060256	A	20000509	US 1997-991644	19971216
CA 2309595	AA	19990624	CA 1998-2309595	19981216
AU 9919205	A1	19990705	AU 1999-19205	19981216
AU 760500	B2	20030515		
EP 1040338	A1	20001004	EP 1998-963991	19981216
R: BE, DE, ES, FR, GB, IT, NL, SE				
US 6436651	B1	20020820	US 2000-503554	20000211

PRIORITY APPLN. INFO.: US 1997-991644 A 19971216
WO 1998-US26759 W 19981216

AB The present invention provides an inexpensive and sensitive device and method for detecting and quantifying analytes present in a medium. The device comprises a metalized film (20) upon which is printed a specific, predetd. pattern of analyte-specific receptors (25). Upon attachment of a target analyte to select areas of the plastic film upon which the receptor is printed, diffraction of transmitted and/or reflected light occurs via the phys. dimensions and defined, precise placement of the analyte. A diffraction image is produced which can be easily seen with the eye or, optionally, with a sensing device.

IC ICM G01N021-47
ICS B41M003-00
CC 9-1 (Biochemical Methods)
IT Bacteria (Eubacteria)
Biosensors
Candida
Cellophane
Diapers
Drugs
Escherichia coli
Fungi
Haemophilus influenzae
Hepatitis
Human immunodeficiency virus 1
Human immunodeficiency virus 2
Latex
Neisseria meningitidis
Neoplasm
Optical diffraction
Rous sarcoma virus

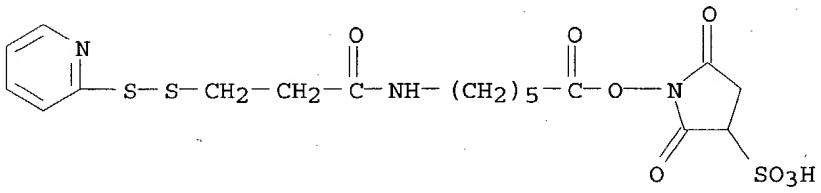
Salmonella
Streptococcus group A
Streptococcus group B
Streptococcus pneumoniae
Virus
Yeast
(optical diffraction biosensor)

IT Antibodies
Carbohydrates, analysis
Carcinoembryonic antigen
Enzymes, analysis
Glass, analysis
Haptens
Hormones, animal, analysis
Lipids, analysis
Nucleic acids
Polycarbonates, analysis
Polysaccharides, analysis
Proteins, general, analysis
Rheumatoid factors
RL: ANT (Analyte); ANST (Analytical study)
(optical diffraction biosensor)

IT **169751-10-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(optical diffraction biosensor)

IT **169751-10-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(optical diffraction biosensor)

RN 169751-10-4 HCAPLUS
CN 3-Pyrrolidinesulfonic acid, 2,5-dioxo-1-[[1-oxo-6-[[1-oxo-3-(2-pyridinyldithio)propyl]amino]hexyl]oxy]-, monosodium salt (9CI) (CA INDEX NAME)



● Na

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:43704 HCAPLUS
DOCUMENT NUMBER: 128:152804
TITLE: Antibody immobilization using heterobifunctional crosslinkers
AUTHOR(S): Shriver-Lake, Lisa C.; Donner, Brian; Edelstein, Rebecca; Breslin, Kristen; Bhatia, Suresh K.; Ligler, France S.
CORPORATE SOURCE: Center for Bio/Molecular Science and Engineering,

Naval Research Laboratory, Washington, DC, 20375-5348, USA
SOURCE: Biosensors & Bioelectronics (1997), 12(11), 1101-1106
CODEN: BBIOE4; ISSN: 0956-5663
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Covalent attachment of functional proteins to a solid support is important for biosensors. One method employs thiol-terminal silanes and hetero-bifunctional crosslinkers such as N-succinimidyl 4-maleimidobutyrate (GMBS) to immobilize proteins through amino groups onto glass, silica, silicon or platinum surfaces. In this report, several heterobifunctional crosslinkers are compared to GMBS for their ability to immobilize active antibodies onto glass cover slips at a high d. Antibodies were immobilized at densities of 74-220 ng/cm2 with high levels of specific antigen binding. **Carbohydrate**-reactive crosslinkers were also compared to GMBS using a fiber optic biosensor to detect fluorescently-labeled antigen. At the concns. tested, the antibodies immobilized with **carbohydrate**-reactive crosslinkers bound more antigen than GMBS immobilized antibodies as indicated by the fluorescence signal.

CC 15-1 (Immunochemistry)
Section cross-reference(s): 9

IT Immunoglobulins
RL: ANT (Analyte); ANST (Analytical study)
(G; amine-reactive and **carbohydrate**-reactive heterobifunctional crosslinkers in immobilization of antibodies to)

IT Antibodies
RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)
(amine-reactive and **carbohydrate**-reactive heterobifunctional crosslinkers in immobilization of)

IT **Biosensors**
Immobilization, biochemical
(amine-reactive and **carbohydrate**-reactive heterobifunctional crosslinkers in immobilization of antibodies)

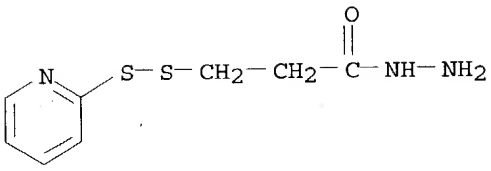
IT Glass, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(amine-reactive and **carbohydrate**-reactive heterobifunctional crosslinkers in immobilization of antibodies)

IT Crosslinking agents
(heterobifunctional; amine-reactive and **carbohydrate**-reactive heterobifunctional crosslinkers in immobilization of antibodies)

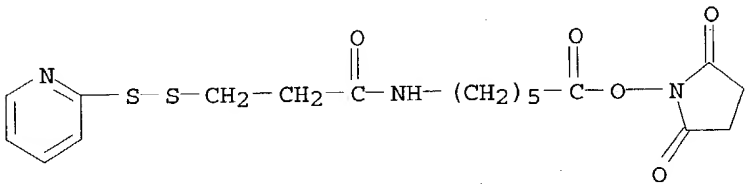
IT 55750-63-5 58626-38-3 68181-17-9, SPDP 112241-19-7
115616-51-8 157797-94-9 **158913-22-5** 174422-72-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(amine-reactive and **carbohydrate**-reactive heterobifunctional crosslinkers in immobilization of antibodies)

IT **115616-51-8 158913-22-5**
RL: RCT (Reactant); RACT (Reactant or reagent)
(amine-reactive and **carbohydrate**-reactive heterobifunctional crosslinkers in immobilization of antibodies)

RN 115616-51-8 HCAPLUS
CN Propanoic acid, 3-(2-pyridinyldithio)-, hydrazide (9CI) (CA INDEX NAME)



RN 158913-22-5 HCAPLUS
CN Propanamide, N-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-3-(2-pyridinyldithio)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT